

## REMARKS

Responsive to the outstanding Office Action, applicant has carefully studied the Examiner's rejections. In the amendment, claims 17, 18, 21, 22 and 30 were amended and claims 20 and 31 were canceled. Favorable reconsideration of the application in light of the following amendments and detailed arguments is respectfully requested.

## IN THE SPECIFICATION

The Examiner noted that certain paragraphs in the specification contained material that was "grammatically awkward". In response thereto, certain paragraphs of the specification have been amended in a manner believed to be more proper idiomatic English. Therefore, withdrawal of these objections to the specification are respectfully requested.

## REJECTIONS UNDER 35 USC 103

The Examiner rejected claims 17-25 and 27-31 under 35 USC 103 as being unpatentable over Attar US 6,821,051 in view of Fleury US 6,062,766.

Claim 17 has been amended herein. Before discussing the prior art, applicants would like to note the subject matter disclosed in amended independent claim 17. Claim 17 discloses an embedded-type reflective road marker comprising a generally convex, rigid shell having a round lower edge and a rigid base which has a round periphery fixed in sealed manner to the lower edge of the shell to form, in combination with the shell, a rigid housing which is round in plan view and

which defines a sealed, internal chamber. The shell and base are of hard, molded plastics material. The shell includes at least one molded plastics reflector, forming an integral part of the shell, to reflect light cast onto the marker in use. The shell also includes a raised, central, diametrically extending rib and a pair of oppositely inclined, externally planar surfaces which are recessed with respect to the rib and which extend downwardly from the rib in directions towards the lower edge of the shell such that the shell has, externally, substantially a gable shape in a cross-section transverse to the rib, the base including a single, central, upstanding diametrically extending support wall located beneath the central rib of the shell in order to limit downward deflection of the rib under vertical loading applied to the marker.

In the action, the examiner stated inter alia that Attar (US 6,821,051) discloses "...a rigid base fixed in sealed manner to a lower edge of the shell ....". It is respectfully submitted that this assertion of the Examiner is incorrect. Attar discloses fixture of the body 20 to the shell 10 by adhesive between the upper surfaces of the walls 26 and the shell or by ultrasonic welding between these surfaces and the shell (see, for example, column 5, lines 31 to 38). There is no disclosure in Attar of fixture of a lower edge of the shell to the periphery of the base, as claimed in amended independent claim 17.

A further important feature of the present invention, as claimed in claim 17, is the provision of a single support wall on the base which underlies the central rib of the shell. This wall, indicated by numeral 102 in Figures 9 to 11, lies just beneath the central rib of the shell, and thereby serves to limit the deflection which

the shell can undergo when subjected to loading by, for example, vehicles which travel over the road marker. At the same time, however, the single wall does not consume a major part of the volume of the internal chamber defined by the shell and base. Thus, although (as stated in lines 7 to 9 on page 12 of the present specification), the wall 102 does limit the internal space available for auxiliary equipment, the fact remains that there is still a substantial amount of space, on either side of the wall, for such equipment. Attar, to the contrary, utilizes multiple walls 26 to support the shell. Because these walls effectively consume the available space it would be impossible for Attar to accommodate ancillary equipment, such as that mentioned in lines 11 to 24 on page 9 of the present specification, in the marker. Thus Attar's marker is considerably less versatile than the marker of the present invention.

A further disadvantageous feature of the Attar design is the fact that it is necessary for connection to be made between the upper surfaces of the walls 26 and at least some of the corner cube prism reflector elements incorporated in the shell (see, for instance, lines 47 to 52 in column 4 of Attar). Regardless of whether adhesive or ultrasonic welding is used for such connection, the fact is that those reflector elements to which connection is made will of necessity have reduced reflection efficiency, which means in turn that the overall reflection efficiency of the road marker is reduced. By way of comparison, the claimed shell and base of the present road marker are connected to one another only at the periphery of the base, and adequate deflection resistance is provided by the claimed single support wall on the base which is not in any way connected to the reflectors forming part of

the shell. In other words, the present invention allows for increased reflection efficiency compared to the design of Attar.

The fact that the sealed connection between the shell and base is at the periphery of the base in the present invention is also advantageous in that the entire internal volume of the marker is sealed. Imperfect sealing of the entire internal space could be highly detrimental in that the ingress of dirt or moisture into the marker could adversely affect the reflective ability of the reflectors and/or operation of any internal ancillary equipment. In the Attar device, to the contrary, where there does not appear to be any sealed connection between the periphery of the base and the shell, it would be possible for dirt or moisture to enter at least the peripheral cavities 24. As those corner cube reflector elements at the lower edges of the shell are exposed to the peripheral cavities, it can be expected that the reflection efficiency of at least those elements will be compromised. The avoidance of ingress of dirt or moisture is especially important in the case of an embedded marker such as that of the present invention, because embedded markers are generally expected to remain securely in place for far longer periods of time than surface mounted markers such as Attar's.

These features of the present invention, which are not disclosed by Attar, are also not disclosed by the Fleury reference. Therefore, no combination of Fleury and Attar disclose the present invention as disclosed in claim 17, as amended herein, and claim 17, and the claims dependent therefrom, are believed to be allowable over the applied references.

Claims 17 and 18 were rejected under 35 USC 103 as being unpatentable over Attar US 6,821,051 in view of Fleury US 6,062,766 and further in view of applicant's disclosure/Armourstud's website.

It is respectfully submitted that nowhere in applicants disclosure, or the cited website, is any information presented which overcomes the deficiencies of the Attar reference as noted above. Therefore, it is respectfully submitted that the present invention, as claimed in claim 17, also defines over this combination of references.

Claim 26 was rejected under 35 USC 103 as being unpatentable over Attar US 6,821,051 in view of Fleury US 6,062,766 and further in view of Mecham (US 7,025,527).

As claim 26 depends, directly or indirectly, from what is believed to be an allowable claim 17, as discussed above, it is respectfully submitted that this claim is allowable based, at least, upon this dependence.

Claim 32 was rejected under 35 USC 103 as being unpatentable over Attar US 6,821,051 in view of Fleury US 6,062,766 and further in view of Jordan US 7,018,131.

As claim 32 depends, directly or indirectly, from what is believed to be an allowable claim 17, as discussed above, it is respectfully submitted that this claim is allowable based, at least, upon this dependence.

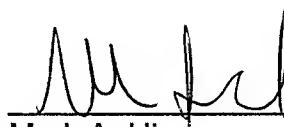
In view of the above, it is respectfully submitted that all of the remaining claims depend, directly or indirectly, from claim 17, which is believed to be allowable for the reasons stated above.

SUMMARY

Claims 17-19, 21-30 and 32 are thus believed to be allowable. It is therefore submitted that the application is now in condition for allowance, and action towards that end is respectfully requested.

Should the Examiner wish to modify the application in any way, applicant's attorney suggests a telephone interview in order to expedite the prosecution of the application.

Respectfully submitted,



---

Mark A. Hixon  
Registration No. 44,766

ATTORNEYS

MARSHALL & MELHORN, LLC  
Four SeaGate - 8<sup>th</sup> Floor  
Toledo, Ohio 43604  
Phone: (419) 249-7114  
Fax: (419) 249-7151  
Customer Number 001678